

RECEIVED
CENTRAL FAX CENTER

FEB 27 2007

Atty Dkt. No.: 10040506-1
USSN: 10/813,337REMARKS

In view of the following remarks, the Examiner is requested to allow Claims 1-16 and 28, the only claims pending and under examination in this application, after entry of the above amendments.

Claim 1 has been amended to indicate that the subject array is addressable. Support for this amendment may be found throughout the specification and claims as originally filed. For instance, support may be found at page 10, lines 13 to 19. Claims 10 and 11 have been amended to clarify the claim language. Claim 25 has been cancelled. Claim 28 has been added. Support for new Claim 28 can be found at page 9, line 16. Accordingly, no new matter has been added by way of these amendments.

As no new matter has been added by way of these amendments, entry thereof by the Examiner is respectfully requested.

Claim Rejections - 35 U.S.C. § 112, second paragraph

Claims 10 and 11 have been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Claims 10 and 11 have been amended. Accordingly, in view of the amendments to Claims 10 and 11, the Applicants contend that this rejection has been rendered moot and respectfully request that it be withdrawn.

Claim Rejections - 35 U.S.C. § 102

Claims 1-9, 12 and 14-16 have been rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Anderson et al. (U.S.P.N. 5,186,824).

According to the M.P.E.P., a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in

Atty Dkt. No.: 10040506-1
USSN: 10/813,337

a single prior art reference. The identical invention must be shown in as complete detail as is contained in the claim. See M.P.E.P. § 2131.

Claims 1-9, 12 and 14-16 are directed to a method of producing an addressable array. Claim 1 reads:

A method of producing an addressable array of at least two different polymeric ligands covalently bonded to a surface of a substrate, said method comprising:

- (a) contacting blocked monomers to at least a first location and a second location of a substrate having a surface displaying functional groups under conditions sufficient for said blocked monomers to covalently bond to said surface in said first and second locations to produce a substrate surface displaying covalently bound blocked monomers;
- (b) removing blocking groups of said blocked monomers in a functional group generation step in a manner such that said surface is not exposed to a triple phase interface line of a gas, solid and liquid; and
- (c) reiterating steps (a) and (b) at least once to produce said addressable array of at least two polymeric ligands.

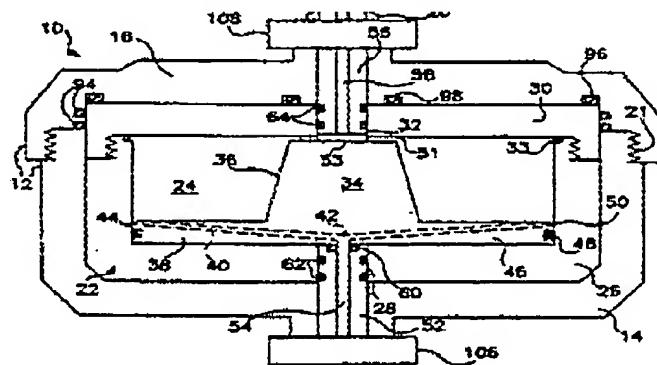
An element of the rejected claims is the production of an addressable array of at least two polymeric ligands.

As recited at page 10, lines 15 to 19 of the Applicants' specification, an "array is 'addressable' when it has multiple regions of different moieties (e.g., different polynucleotide sequences) such that a region (i.e., a "feature" or "spot" of the array) at a particular predetermined location (i.e., an "address") on the array will detect a particular target or class of targets."

The Applicants contend that Anderson does not teach the production of an addressable array. Anderson does not teach the production of an addressable array because Anderson is directed to a centrifugal synthesizer, as exemplified in the figure below. Anderson's disclosed centrifugal synthesizer (10) includes a rotor body

Atty Dkt. No.: 10040506-1
USSN: 10/813,337

(12) containing a hollow core defining a chamber (24), a central core member (34) and a means for generating and introducing fluids (e.g., reagents) of different densities into the hollow core of the rotor body during rotation such that the fluids introduced form layers of differing densities.



The hollow core (24) of the rotor body (12) is filled with a suspension of a sedimented solid phase support medium. The centrifugal synthesizer functions to control the flow of liquid across the solid phase support.

There is, however, no teaching in Anderson with respect to using the disclosed centrifugal synthesizer to produce an addressable array of at least two polymeric ligands. Rather, the solid phase support being in the fluid suspension is uniformly contacted with the same reagents. Hence, because the solid phase support is contacted with the same reagents, Anderson does not teach the production of an array that contains different chemical moieties at particular predetermined locations. Accordingly, Anderson is deficient in that it fails to teach an addressable array of at least two different polymeric ligands.

In view of the above, Anderson does not anticipate the Applicants' claims because Anderson does not teach all the elements of the rejected claims. Therefore, the Applicants respectfully request that the 35 U.S.C. § 102(b) rejection of Claims 1-9, 12 and 14-16 be withdrawn.

Atty Dkt. No.: 10040506-1
USSN: 10/813,337

Claim Rejections - 35 U.S.C. § 103

Claims 10 and 11 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Anderson et al.

According to the MPEP § 706.02 (j), to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

Claims 10 and 11 depend ultimately from Claim 1. As set forth above, Claim 1 is directed to a method of producing an addressable array. The method includes an iterative process whereby an array is produced by repeating the steps of (a) contacting blocked monomers to a substrate having a surface displaying functional groups and (b) removing the blocking groups of the blocked monomers in a functional group generation step, so as to produce an addressable array of at least two polymeric ligands.

As described above, Anderson is deficient in that it fails to teach all the elements of the rejected claims. In particular, Anderson fails to teach or suggest an "addressable" array of at least two polymeric ligands because the sedimented solid phase supports of Anderson are in the suspension within the chamber of the hollow rotor and are contacted with the same reagents. Because the solid phase supports are contacted with the same reagents, Anderson does not teach or suggest the production of an array that contains different chemical moieties at particular predetermined locations.

Accordingly, Anderson is deficient in that it fails to teach or suggest an addressable array. Consequently, the Applicants respectfully request that the 35 U.S.C. § 103(a) rejection of Claims 10 and 11 be withdrawn.

Atty Dkt. No.: 10040506-1
USSN: 10/813,337

Claim 13 has been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Anderson et al. in view of Blanchard (U.S.P.N. 6,384,210).

Claim 13 is dependant on Claim 1. Claim 1 is directed to a method of producing an addressable array. As described above, Anderson is deficient in that it fails to teach or suggest this element of the rejected claims. Since Blanchard was cited solely for its disclosure of the use of a pulse jet for the addition of monomers to a substrate, Blanchard fails to remedy the deficiencies of Anderson. In view of the above, the Applicants contend that a *prima facie* case of obviousness has not been established and, therefore, respectfully request that the 35 U.S.C. § 103(a) rejection of Claim 13 be withdrawn.

Double Patenting

Claims 1-16 of this application are rejected under the doctrine of obviousness-type double patenting as being unpatentable over claims of U.S. Patent Application Nos. 10/813,467; 11/234,701; 10/813,331 and 11/082,006.

The Applicants categorically disagree with these rejections. However, solely to expedite prosecution, the Applicants provide herewith a Terminal Disclaimer over U.S. Patent Application Nos. 10/813,467; 11/234,701; 10/813,331 and 11/082,006.

The Applicants note that the filing of a Terminal Disclaimer to obviate a rejection based on non-statutory double patenting is not an admission of the propriety of the rejection.¹ As such, while the Applicants firmly believe that this rejection fails to meet the requirements for Obviousness-Type Double Patenting set forth in MPEP § 804, a Terminal Disclaimer is nevertheless filed.

¹ *Quad Environmental Technologies Corp. v. Union Sanitary District*, 946 F.2d 870, 20 USPQ2d 1392 (Fed. Cir. 1991). The court indicated that the "filing of a terminal disclaimer simply serves the statutory function of removing the rejection of double patenting, and raises neither a presumption nor estoppel on the merits of the rejection."

RECEIVED
CENTRAL FAX CENTER

FEB 27 2007

Atty Dkt. No.: 10040506-1
USSN: 10/813,337

Accordingly, in view of terminal disclaimer(s) filed herewith, the Applicants respectfully request that this rejection be withdrawn.

New Claim

New Claim 28 depends from Claim 1 and incorporates the elements recited therein. Accordingly, for the reasons stated herein above, Claim 28 is patentable.

RECEIVED
CENTRAL FAX CENTER

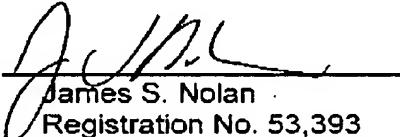
FEB 27 2007

Atty Dkt. No.: 10040506-1
USSN: 10/813,337CONCLUSION

Applicants submit that all of the claims are in condition for allowance, which action is requested. If the Examiner finds that a telephone conference would expedite the prosecution of this application, please telephone Bret Field at (650) 327-3400.

The Commissioner is hereby authorized to charge any underpayment of fees associated with this communication, including any necessary fees for extensions of time, or credit any overpayment to Deposit Account No. 50-1078, order number 10040506-1.

Respectfully submitted,

Date: February 27, 2007By: James S. Nolan
Registration No. 53,393

Enclosure(s): Terminal Disclaimer(s) as to U.S. Patent Application Nos. 10/813,467; 11/234,701; 10/813,331 and 11/082,006.

AGILENT TECHNOLOGIES, INC.
Legal Department, DL429
Intellectual Property Administration
P.O. Box 7599
Loveland, CO 80537-0599

F:\DOCUMENT\AGIL\200 (10040506-1)\10040506-1 (AGIL-200) Resp OA of 11-27-06.doc